

10/086250

EW
WFC

Robert Greene Sterne
Jorge A. Goldstein
David K.S. Cornwell
Robert W. Esmond
Tracy-Gene G. Durkin
Michele A. Cimballa
Michael B. Ray
Robert E. Sokohl
Eric K. Steffe
Michael Q. Lee
Steven R. Ludwig
John M. Covert
Linda E. Horner
Robert C. Millonig
Donald J. Featherstone
Timothy J. Shea, Jr
Michael V. Messinger
Judith U. Kim

Patrick E. Garrett
Jeffrey T. Helvey
Eldora L. Ellison
Thomas C. Fiala
Donald R. Banowitz
Peter A. Jackman
Jeffrey S. Weaver
Brian J. Del Buono
Edward W. Yee
Vincent L. Capuano
Virgil Lee Beaton
Theodore A. Wood
Elizabeth J. Haanes
Joseph S. Ostroff
Frank R. Cottingham
Daniel A. Klein
Jason D. Eisenberg
Michael D. Specht

Tracy L. Muller
Jon E. Wright
LuAnne M. DeSantis
Ann E. Summerfield
Helene C. Carlson
Cynthia M. Bouchez
Timothy A. Doyle
Gabby L. Longworth
Lori A. Gordon
Laura A. Vogel
Bryan S. Wade
Bashir M.S. Ali
Shannon A. Carroll
Matthew E. Kelley
Anbar F. Khal
Michelle K. Holoubek
Marsha A. Rose
Young Tang

Christopher J. Walsh
W. Blake Coblenz
James J. Pohl
John T. Haran
Mark W. Rygiel
Kevin W. McCabe

Registered Patent Agents*
Karen R. Markowicz
Matthew J. Dowd
Katrina Yujian Pei Quach
Bryan L. Skelton
Robert A. Schwartzman
Victoria S. Rutherford
Simon J. Elliott
Julie A. Heider
Mita Mukherjee

Scott M. Woodhouse
Liliana Di Nola-Baron
Peter A. Socarras
Jeffrey K. Mills
Danielle L. Letting
Lori Brandes
Steven C. Oppenheimer

Of Counsel
Edward J. Kessler
Kenneth C. Bass III
Marvin C. Guthrie

*Admitted only in Maryland
*Admitted only in Virginia
*Practice Limited to Federal Agencies

September 28, 2006

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

WRITER'S DIRECT NUMBER:
(202) 772-8831
INTERNET ADDRESS:
JWEAVER@SKGF.COM

Art Unit 2687

**Attn: Mail Stop
Certificate of Correction Branch**

Re: U.S. Utility Patent No. 7,016,663 B2; Issued: March 21, 2006
For: **Applications of Universal Frequency Translation**
Inventors: **SORRELLS et al.**
Our Ref: 1744.0140006

Sir:

Certificate

OCT 02 2006

of Correction

Transmitted herewith for appropriate action are the following documents:

1. Request for Corrected Certificate of Correction Under 37 C.F.R. § 1.322;
2. Completed Form PTO-1050, with the noted corrections printed thereon;
3. Copy of the date stamped postcard showing proof of filing of the Request for Certificate of Correction Under 37 C.F.R. § 1.322 on May 2, 2006;
4. Copy of the SKGF Cover Letter that accompanied the filing of May 2, 2006;
5. Copy of Request Certificate of Correction Under 37 C.F.R. § 1.322 filed on May 2, 2006;
6. Copy of Completed Form PTO-1050, with the noted corrections printed thereon filed on May 2, 2006; and
7. One (1) return postcard.

It is respectfully requested that the attached postcard be stamped with the date of filing of these documents, and that it be returned to our courier. In the event that extensions of time are necessary to prevent abandonment of this patent application, then such extensions of time are hereby petitioned.

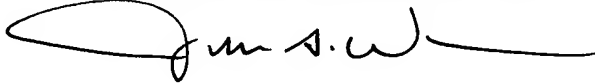
OCT 03 2006

Commissioner for Patents
September 28, 2006
Page 2

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

A handwritten signature in black ink, appearing to read "J. S. W.", with a long horizontal flourish extending to the right.

Jeffrey S. Weaver
Attorney for Patentees
Registration No. 45,608

MQL/JSW:apg
Enclosures

588506_1.DOC

OCT 03 2006



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent of:

SORRELLS *et al.*

Patent. No.: 7,016,663 B2

Issued: March 21, 2006

For: **Applications of Universal
Frequency Translation**

Confirmation No.: 1369

Art Unit: 2687

Examiner: Bhattacharya, Sam

Atty. Docket: 1744.0140006

**Request for Corrected Certificate of Correction
Under 37 C.F.R. § 1.322**

Attn: Certificate of Correction Branch

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

It is hereby requested that a Corrected Certificate of Correction under 37 C.F.R. § 1.322 be issued for the above-captioned United States Patent. This Certificate of Correction is being requested due to mistakes which appear in the printed patent. These mistakes were made by the U.S. Patent and Trademark Office (USPTO). A request for Certificate of Correction Under 37 C.F.R. § 1.322 was filed with the USPTO on May 2, 2006, including the changes request herein. We received an original Certificate of Correction on August 3, 2006, but noticed that the corrections requested on the second page of the PTO/SB/44 were not included.

OCT 03 2006

Specifically, the errors contained in the printed patent that were not corrected with our original request of May 2, 2006 are:

- In column 38, after line 41, please insert claims 37 and 38, shown below:

- **Claims 37 and 38**

37. A method for communication in a network, comprising the steps of:

(1) receiving a first communication signal;

(2) down-converting said first communication signal to generate a second communication signal, said second communication signal having a lower frequency than said first communication signal, using at least one sub-sampling switch, a storage device coupled to said at least one sub-sampling switch to store energy from the sub-sampling switch, wherein said at least one sub-sampling switch and said storage device operate according to control signal apertures such that energy is integrated over said control signal apertures, said second communication signal generated from the stored energy, and a control signal generator coupled to said at least one sub-sampling switch; and

(3) up-converting a third signal to generate a fourth signal, using at least one second switch coupled to a bias signal and a control signal.

38. The method of claim 37, wherein the network is a wireless local area network (WLAN).

Remarks

The above-noted corrections do not involve such changes in the patent as would constitute new matter or would require reexamination.

In support of the above request, a copy of the May 2, 2006 filing is enclosed for your review.

A completed Form PTO/SB/44 accompanies this request, with the above-noted corrections printed thereon. Accordingly, a Certificate of Correction is believed proper and issuance thereof is respectfully requested.

The Commissioner is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



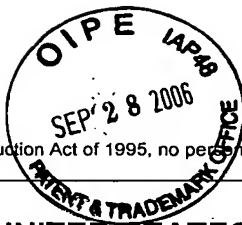
Jeffrey S. Weaver
Attorney for Patentees
Registration No. 45,608

Date: September 28, 2006

1100 New York Avenue, N.W.
Washington, D.C. 20005-3934
(202) 371-2600

588489_1.DOC

001 03 2006



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number

PTO/SB/44 (07-03)
Approved for use through 01/31/2007. OMB 0651-0033
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
(Also Form PTO-1050)

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO: 7,016,663 B2

DATED: March 21, 2006

INVENTORS: SORRELLS *et al.*

It is certified that errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below.

Column 38

After line 41, please insert claims 37 and 38, shown below:

Claims 37 and 38

37. A method for communication in a network, comprising the steps of:

- (1) receiving a first communication signal;
- (2) down-converting said first communication signal to generate a second communication signal, said second communication signal having a lower frequency than said first communication signal, using at least one sub-sampling switch, a storage device coupled to said at least one sub-sampling switch to store energy from the sub-sampling switch, wherein said at least one sub-sampling switch and said storage device operate according to control signal apertures such that energy is integrated over said control signal apertures, said second communication signal generated from the stored energy, and a control signal generator coupled to said at least one sub-sampling switch; and
- (3) up-converting a third signal to generate a fourth signal, using at least one second switch coupled to a bias signal and a control signal.

38. The method of claim 37, wherein the network is a wireless local area network (WLAN).

MAILING ADDRESS OF SENDER:

Sterne, Kessler, Goldstein & Fox P.L.L.C.
1100 New York Avenue, N.W.
Washington, DC 20005-3934

PATENT NO. 7,016,663 B2

No. of additional copies

→ 1

This collection of information is required by 37 CFR 1.322, 1.323 and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you are required to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

588497_1.DOC

Rev. 10/03/03 svb

001 03 2006

COPY

Patentees: SORRELLS *et al.*

Patent No.: 7,016,663 B2

Issued: March 21, 2006

For: Applications of Universal Frequency Translation

Due Date: NONE

Art Unit: 2687

Confirmation No.: 1369

Examiner: Bhattacharya, Sam

Docket: 1744.0140006

Atty: MQL/JSW

When receipt stamp is placed hereon, the USPTO acknowledges receipt of the following documents:

1. SKGF Cover Letter;
2. Request for Certificate of Correction Under 37 C.F.R. § 1.322;
3. Completed Form PTO-1050, with the noted corrections printed thereon; and
4. One (1) return postcard.



Mail Stop: Certificate of Correction Branch
Please Date Stamp and Return to Our Courier

527086_1.DOC

OCT 03 2006

COPY



Robert Greene Sterne
Jorge A. Goldstein
David K.S. Cornwell
Robert W. Esmond
Tracy-Gene G. Durkin
Michele A. Cimbala
Michael B. Ray
Robert E. Sokohl
Eric K. Steffe
Michael Q. Lee
Steven R. Ludwig
John M. Covert
Linda E. Horner
Robert C. Millonig
Donald J. Featherstone
Timothy J. Shea, Jr
Michael V. Messinger
Judith U. Kim

Patrick E. Garrett
Jeffrey T. Helvey
Heidi L. Kraus
Eldora L. Ellison
Thomas C. Fiala
Donald R. Banowitz
Peter A. Jackman
Jeffrey S. Weaver
Brian J. Del Buono
Edward W. Yee
Vincent L. Capuano
Virgil Lee Beaton
Theodore A. Wood
Elizabeth J. Haanes
Joseph S. Ostroff
Frank R. Cottingham
Rae Lynn P. Guest
Daniel A. Klein

Jason D. Eisenberg
Michael D. Specht
Tracy L. Muller
Jon E. Wright
Thomas M. DeSantis
Ann E. Summerfield
Helene C. Carlson
Cynthia M. Bouchez
Timothy A. Doyle
Edward L. Longworth
Lori A. Gordon
Gaby L. Vogel
Laura A. Wade
Bryan S. Ali
Shannon A. Carroll
Matthew E. Kelley
Michelle K. Holoubek
Marsha A. Rose

Christopher J. Walsh
W. Blake Coblenz*
James J. Pohl*
Young Tang
John T. Haran*
Mark W. Rygiel

Registered Patent Agents*
Karen R. Markowicz
Matthew J. Dowd
Katrina Yujian Pei Quach
Bryan L. Skelton
Robert A. Schwartzman
Victoria S. Rutherford
Simon J. Elliott
Julie A. Heider
Mita Mukherjee
Scott M. Woodhouse

Liliana Di Nola-Baron
Peter A. Socarras
Jeffrey K. Mills
Danielle L. Letting
Lori Brandes

Of Counsel
Edward J. Kessler
Kenneth C. Bass III
Marvin C. Guthrie

*Admitted only in Maryland
*Admitted only in Virginia
*Practice Limited to
Federal Agencies

May 2, 2006

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

WRITER'S DIRECT NUMBER:
(202) 772-8831
INTERNET ADDRESS:
JWEAVER@SKGF.COM

Art Unit 2687

**Attn: Mail Stop
Certificate of Correction Branch**

Re: U.S. Utility Patent
Patent No. 7,016,663 B2; Issued: March 21, 2006
For: **Applications of Universal Frequency Translation**
Inventors: **SORRELLS et al.**
Our Ref: 1744.0140006

Sir:

Transmitted herewith for appropriate action are the following documents:

1. Request for Certificate of Correction Under 37 C.F.R. § 1.322;
2. Completed Form PTO-1050, with the noted corrections printed thereon; and
3. One (1) return postcard.

It is respectfully requested that the attached postcard be stamped with the date of filing of these documents, and that it be returned to our courier. In the event that extensions of time are necessary to prevent abandonment of this patent application, then such extensions of time are hereby petitioned.

Commissioner for Patents

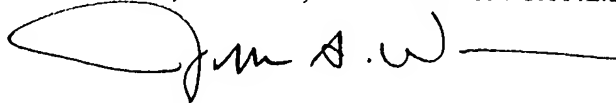
May 2, 2006

Page 2

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

A handwritten signature in black ink, appearing to read "Jm A. W.", followed by a horizontal line.

Jeffrey S. Weaver
Attorney for Patentees
Registration No. 45,608

MQL/JSW:apg
Enclosures

527092_1.DOC

OCT 03 2006



COPY

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent of:

SORRELLS *et al.*

Patent. No.: 7,016,663 B2

Issued: March 21, 2006

For: **Applications of Universal
Frequency Translation**

Confirmation No.: 1369

Art Unit: 2687

Examiner: Bhattacharya, Sam

Atty. Docket: 1744.0140006

**Request for Certificate of Correction
Under 37 C.F.R. § 1.322**

Attn: Certificate of Correction Branch

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

It is hereby requested that a Certificate of Correction under 37 C.F.R. § 1.322 be issued for the above-captioned United States Patent. This Certificate of Correction is being requested due to mistakes which appear in the printed patent. These mistakes were made by the U.S. Patent and Trademark Office.

Specifically, the printed patent contains the following errors for which a Certificate of Correction is respectfully requested:

- In the References Cited section, on page 9, line 61 in the first column, "Notzl" should be changed to --Ndzi--.
- In the References Cited section, on page 13, line 49 in the second column, "Fast" should be changed to --Fest--.
- In the References Cited section, on page 14, line 23 in the first column, "023350" should be changed to --023359--.

OCT 03 2006

- In column 7, lines 24 and 25 should be deleted and replaced with
$$--(\text{Freq}_{input} - \text{Freq}_{IF})/n = \text{Freq}_{control}$$
$$(901 \text{ MHZ} - 1 \text{ MHZ})/n = 900/n--.$$

- In column 7, lines 55 and 56 should be deleted and replaced with
$$--(\text{Freq}_{input} - \text{Freq}_{IF})/n = \text{Freq}_{control}$$
$$(900 \text{ MHZ} - 0 \text{ MHZ})/n = 900 \text{ MHZ}/n--.$$

- In column 8, lines 22 and 23 should be deleted and replaced with
$$--(\text{Freq}_{input} - \text{Freq}_{IF})/n = \text{Freq}_{control}$$
$$(900 \text{ MHZ} - 0 \text{ MHZ})/n = 900 \text{ MHZ}/n--.$$

- In column 38, after line 41, please insert claims 37 and 38, shown below:

- **Claims 37 and 38**

37. A method for communication in a network, comprising the steps of:

- (1) receiving a first communication signal;
- (2) down-converting said first communication signal to generate a second communication signal, said second communication signal having a lower frequency than said first communication signal, using at least one sub-sampling switch, a storage device coupled to said at least one sub-sampling switch to store energy from the sub-sampling switch, wherein said at least one sub-sampling switch and said storage device operate according to control signal apertures such that energy is integrated over said control signal apertures, said second communication signal generated from the stored energy, and a control signal generator coupled to said at least one sub-sampling switch; and
- (3) up-converting a third signal to generate a fourth signal, using at least one second switch coupled to a bias signal and a control signal.

38. The method of claim 37, wherein the network is a wireless local area network (WLAN).

OCT 03 2006

Remarks

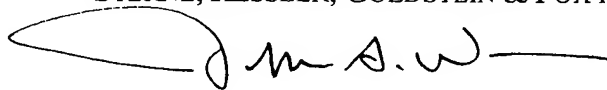
The above-noted corrections do not involve such changes in the patent as would constitute new matter or would require reexamination.

A completed Form PTO/SB/44 accompanies this request, with the above-noted corrections printed thereon. Accordingly, a Certificate of Correction is believed proper and issuance thereof is respectfully requested.

The Commissioner is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

A handwritten signature in black ink, appearing to read "J. M. A. W.", is written over a horizontal line.

Jeffrey S. Weaver
Attorney for Patentees
Registration No. 45,608

Date: May 2, 2006

1100 New York Avenue, N.W.
Washington, D.C. 20005-3934
(202) 371-2600

527046_1.DOC

OCT 03 2006

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO: 7,016,663 B2

DATED: March 21, 2006

INVENTORS: SORRELLS *et al.*

It is certified that errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below.

References Cited Section

On page 9, line 61 in the first column, "Notzl" should be changed to --Ndzi--.

References Cited Section

On page 13, line 49 in the second column, "Fast" should be changed to --Fest--.

References Cited Section

On page 14, line 23 in the first column, "023350" should be changed to --023359--.

Column 7

In lines 24 and 25 should be deleted and replaced with

--($\text{Freq}_{\text{input}} - \text{Freq}_{\text{IF}}$)/n = $\text{Freq}_{\text{control}}$
(901 MHZ-1 MHZ)/n=900/n--.

Column 7

In lines 55 and 56 should be deleted and replaced with

--($\text{Freq}_{\text{input}} - \text{Freq}_{\text{IF}}$)/n = $\text{Freq}_{\text{control}}$
(900 MHZ-0 MHZ)/n = 900 MHZ/n--.

Column 8

In lines 22 and 23 should be deleted and replaced with

--($\text{Freq}_{\text{input}} - \text{Freq}_{\text{IF}}$)/n = $\text{Freq}_{\text{control}}$
(900 MHZ-0 MHZ)/n=900 MHZ/n--.

MAILING ADDRESS OF SENDER:

Sterne, Kessler, Goldstein & Fox P.L.L.C.
1100 New York Avenue, N.W.
Washington, DC 20005-3934

PATENT NO. 7,016,663 B2

No. of additional copies

 1

This collection of information is required by 37 CFR 1.322, 1.323 and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you are required to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO: 7,016,663 B2

DATED: March 21, 2006

INVENTORS: SORRELLS *et al.*

It is certified that errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below.

Column 38

After line 41, please insert claims 37 and 38, shown below:

Claims 37 and 38

37. A method for communication in a network, comprising the steps of:

- (1) receiving a first communication signal;
- (2) down-converting said first communication signal to generate a second communication signal, said second communication signal having a lower frequency than said first communication signal, using at least one sub-sampling switch, a storage device coupled to said at least one sub-sampling switch to store energy from the sub-sampling switch, wherein said at least one sub-sampling switch and said storage device operate according to control signal apertures such that energy is integrated over said control signal apertures, said second communication signal generated from the stored energy, and a control signal generator coupled to said at least one sub-sampling switch; and
- (3) up-converting a third signal to generate a fourth signal, using at least one second switch coupled to a bias signal and a control signal.

38. The method of claim 37, wherein the network is a wireless local area network (WLAN).

MAILING ADDRESS OF SENDER:

Sterne, Kessler, Goldstein & Fox P.L.L.C.
1100 New York Avenue, N.W.
Washington, DC 20005-3934

PATENT NO. 7,016,663 B2

No. of additional copies

→ 1

This collection of information is required by 37 CFR 1.322, 1.323 and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you are required to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.